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ABSTRACT

A study attempted to measure the effects of contingency management, conditions that essentially forced subjects to write, on their writing productivity and creative ideas. Subjects were 27 published college faculty with doctorates, divided into three groups of nine. The first or contingency group participated in a "baseline phase" during which they wrote on scheduled days only if they felt like it. At the end of this phase, the subjects established a daily writing output goal and contracted for a strong external contingency--a personal financial penalty for every day they did not meet that goal. The second or noncontingent group also participated in the baseline phase, after which they were just verbally encouraged to write during each scheduled writing day. The third or control group agreed to defer all but the absolutely necessary academic writing tasks until 10 weeks had passed. The writing output of all three groups was charted by the subjects. The results indicated that the contingency group produced a clearly higher level of written pages per day than did either of the other groups during the equivalent period. The introduction of instructions to write more appears to have produced a moderate increase over baseline levels in the noncontingent group. Subjects in the control group did not produce a substantial amount of nonacademic writing despite maintenance of graphs and logs. Contingency management of writing productivity also facilitated rather than impeded the appearance of creative ideas for writing. (HTH)

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Title: Does Productivity Precede Creativity in Writing? Implications for the Clinical Treatment of Writing Blocks

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CS207 227

Does Productivity Precede Creativity in Writing?

Implications for the Clinical Treatment of Writing Blocks

The treatment of writing problems offers a special challenge for clinical psychologists. In few other domains do patients pressure themselves to be so spontaneous, original, and perfect. And almost nowhere else have therapists been so reluctant to treat a behavior as ordinary and lawful.

Until recently, the literature on writing problems was dominated by speculative accounts such as Bergler's (1950) conclusion that all writers have an unconscious need to be rejected by a mother figure. The most prominent of behavioral accounts of writing, similarly, is Pear's (1977) nonexperimental analysis of the habits of a professional novelist. There is, however, growing evidence that ordinary behavioral techniques are effective in the treatment of 'blocked' writers (Boudin, 1972; Harris, 1974; Nurnberger & Zimmerman, 1970; Passman, 1976). Overall, there is a clear indication that contingency management can be used to induce stable writing habits in patients who complained of an inability to write (Boice, 1982a).

Nonetheless, therapists who might otherwise apply behavioral techniques remain skeptical about the use of contingency management with writing problems. How, the argument goes, can pressuring writers with techniques that emphasize output alone help but interfere with creativity in writing (e.g., Henning, 1981)?

In a sense this question is as old as more general concerns about the artificiality and superficiality of behavioral techniques; not surprisingly, answers of a sort are already available. Skinner (1972), for example, has defended his conviction that behavior can be creative when it is 'produced'. And behavioral researchers working in classroom situations have shown that contingency management of written exercises was associated with higher ratings of quality and creativity (Ballard & Glynn, 1975; Maloney & Hopkins, 1973).

But neither defense of 'produced' writing has had much apparent impact on practicing clinicians. Skinner's points may be dismissed as anecdotal. The experiments on contingency management and writing have been largely limited to elementary students, to writing assignments as brief as 10 sentences, and to the shaping of compositional factors such as variation in action verbs. What remains is the necessity of testing for the effects of contingency management on writing and writers analogous to those treated by therapists.

Evidence for a facilitative effect of contingency management on creativity in writing would coincide with a recent shift in the attitudes of researchers in both writing and creativity. Where psychologists had once concluded that creativity may not be controllable (Getzels & Jackson, 1962), they now view creative behaviors in terms of ordinary thought processes that do not depend upon spontaneity and sudden insight (Perkins, 1981). Composition researchers have followed a kindred pattern in rejecting the traditional belief that creativity depends on freedom from external constraints (Wason, 1980); now, inspiration and spontaneity are seen as ill-adapted to solve the thinking problems inherent in good writing (Flower & Hayes, 1977). In the newer view, writing itself is posited as the vehicle of discovery (Perl, 1980).

The present study is an attempt to measure the effects of contingency management on the productivity of written material and on the attendant appearance of creative ideas for writing. Those two forms of output, of written pages and of novel ideas relevant to writing projects, are compared here in three groups of subjects exposed to differing levels of pressure to produce writing. Subjects were academicians who sought treatment to increase their productivity in completing unfinished writing tasks relevant to their professional carrers. The expectation was that contingency management would produce the highest rates of writing and the highest rates of reporting creative ideas for writing.

METHOD

Subjects

Twenty-seven academicians from local campuses volunteered as subjects in response to calls for participants delivered in colloquium talks about faculty development and in referrals from departmental chairs and other administrators. None were known personally to the experimenter/author beforehand. All that volunteered were used. While none of these subjects reported a serious writing block (i.e., an inability to write accompanied by evidence of interference with daily activities), all expressed a strong desire to increase their output as professional writers. All subjects had earned doctorates and held academic appointments, all had authored or co-authored at least one professional publication in the preceding three years, and all produced evidence of at least one uncompleted project which they hope to submit for publication. All subjects agreed at the outset to accept assignment to any one of three treatment groups with the understanding that, at the conclusion of the formal experiment, they could opt for informal membership in another group. Until that time, however, subjects were not given the rationale for any of the experimental procedures. Assignment to groups was random except for constraints on sex; where subjects dropped out of the experiment they were replaced by the next volunteer.

Procedure

All subjects met individually with the investigator in one 10 min. session each week, usually in the subject's office, and typically in a sequence that permitted several successive contacts with proximal faculty. The primary purpose of these meetings was to keep the subjects engaged in the project and to update records of their outputs in written pages and in creative ideas logged. Graphs of daily writing productivity were verified by perusing pages completed by subjects in the previous week. Subjects graphed pages in equivalents of

typed versions; up to one rewritten page could be credited toward each daily total. All subjects scheduled five regular writing times per week throughout their participation in this project.

Creative ideas for writing were logged by subjects on mimeographed sheets in the style of research on thought-listing (Cacciopo & Petty, 1981). Logging took place at the outset of each period where writing was scheduled. Each thought-listing sheet was headed with these instructions:

> Ideas to be listed here must be useful and relevant to professional writing projects, they must be novel or original to the writer/thinker, they must have occurred since the last scheduled writing day, and they must be entered at the time of day when writing is scheduled for completion. Do not enter ideas that have already been listed in similar form. Try to express the idea succinctly and add a brief note about its possible significance. If you have more than four ideas to list in any one day, enter the first four that occurred to you.

In only eight instances did subjects report that they would have listed more than four creative ideas in one daily list. A typical example of an acceptable listing was an idea about a connection between ideas that hitherto had not been seen. Weekly meetings with subjects were used to provide feedback on log entries only where they were deemed clearly inappropriate (e.g., listing a concern about not writing enough, listing an idea for a planned novel by a social scientist).

This measure of creative output was chosen in part because of indications that self-reports of creative activity and accomplishment constitute the most defensible index of creativity (Hocevar, 1981). But the rationale for self-ratings went beyond problems inherent in other tests of creativity to practical

considerations. If, say, a panel of experts was employed to rate the logged entries of subjects, how could the panel know which ideas were really novel or useful for a particular subject? Monitoring the logs of 27 subjects of this study indicated that few participants claimed more than two or three ideas that did not appear to meet the criteria of originality and usefulness, and then with seeming unawareness. Moreover, discussions of log entires with subjects suggested that their ideas were invariably the result of a real and pleasant discovery process, and often a matter of strong enthusiasm. While self-reported and self-evaluated measurements of creativity may not be the ultimately desirable means of assessment, this approach has two more justifications: It seems better to get on with even a preliminary approach than to await the inspiration and security of a formalized measure of original thinking in writing. And, the subject-generated listings of creative ideas used here provided a consistent view of how the production of writing and of ideas for better writing may interact. If there was bias in the feedback given by the experimenter, it was probably influenced by two considerations: One is that while attractive criteria for creativity such as appropriateness, transformation, and condensation exist (e.g., Jackson & Messick, 1965) they are difficut to operationalize. The second is that where definitions have been successfully operationalized, creativity was simply equated to novelty (Maloney & Hopkins, 1973).

Contingency management group -- Nine subjects began with what was described to them as a 'baseline phase' for writing. They were instructed to schedule writing five times a week but to write only if they 'feit like it.' These subjects remained in the basline phase for a minimum of 10 scheduled writing days and until they had produced no written copy on at least three consecutive writing

days. At the end of the baseline phase, all subjects agreed to establish a daily goal level of producing three written pages and to enforce that goal by contracting for a strong external contingency. The contingency was based on a 'productive avoidance' procedure devised by Nurnberger and Zimmerman (1970): each subject agreed to issue five $15 checks from their own funds that were made out to a depised organization. On any day when the goal level of writing output was not met, a check was mailed by a third person. Each subject in the contingency management group remained in this contract for at least 30 scheduled writing days or six weeks.

Noncontingent/sustained group — Nine subjects began with the same instructions for a baseline phase as given to contingency subjects, including the advice in basic stimulus control techniques given to all subjects:

> Do all your writing in one comfortable and undistracted location. Do nothing but writing in that location and try to do it at the same time each day. Inform others that you do not wish to be disturbed during these writing times.

But noncontingent subjects, because their baseline measures of writing output were not formally used to assess the effects of an intervention like contingency management, remained in this phase for a fixed period of 15 scheduled writing days. At the end of those 15 days subjects were informed that although they should continue writing when they felt like it, it was time to begin writing more and that they might accomplish this by stopping to consider doing some writing at each scheduled writing time. They were instructed to sustain this regular expectation of doing more writing for a period of at least 20 scheduled days.

Control group -- These nine subjects agreed to defer any but absolutely necessary writing tasks until 50 potential writing days and 10 weeks had passed.

They received the same instructions in the use of stimulus control techniques as did other subjects, they scheduled regular times when writing might have been done, and they carried out charting and listing activities in the manner described above. This group was designed as a control for conditions which otherwise might impel academicians to write. Regular inquiries suggested (but did not prove) that these subjects did abstain from professional writing during the course of their participation.

RESULTS

In addition to the 27 subjects depicted here, 15 subjects dropped out of this program before providing useful amounts of data (i.e., about six weeks of continuous participation): three dropped out of the contingency group, two out of the noncontingent/sustained group, and 10 out of the control group. All drop-outs but one cited the nuisance of charting and listing on a regular basis as their primary reason. Control group subjects did not complain about the inefficacy of their paradigm; they spontaneously reported believing that it was a deprivation procedure which would make them "want to write".

Table 1 summarizes the writing output of subjects in all three groups in the periods before and after the onset of more sustained writing (for the two noncontrol groups). Control group subjects, of course, had no such change in conditions but their data are shown for roughly equivalent periods. Three

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Insert Table 1 About Here

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results merit mention here: First, under the contingency condition, the contingency management group produced a clearly higher level of written pages per day than did either of the other groups during the equivalent period. Second, the introduction of instructions to write more appears to have produced a moderate

increase over baseline levels in the noncontingent group. Third, subjects who remained in the control group did not produce a substantial amount of writing over 10 weeks of scheduling regular writing times despite maintenance of graphs and logs.

Figure 1 shows the individual graphs of creative productivity for the 18 subjects in the two 'experimental' groups. Both the noncontingent/spontaneous group (subjects a-i) and contingent groups (subjects j-r) produced fewer ideas

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Insert Figure 1 About Here

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in the period before writing became habitual. Once the expectation of increased writing or the external contingency for writing at goal levels was introduced, levels of listing novel ideas for writing generally increased. Two subjects in the noncontingent/spontaneous group (e & h) evidenced little indication of productivitity in new ideas for writing, although both appeared to be attending to the task of logging faithfully. An overall view of Figure 1 suggests that the productivity of creative ideas was greatest under conditions of an external contingency.

Figure 2 confirms that impression in terms of averaged curves for all three groups. Contingency subjects did produce higher levels of reported creative ideas

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Insert Figure 2 About Here

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after the baseline phase than did noncontingent subjects. Figure 2 also indicates other important results: First, all three groups evidenced an initial high level of reporting novel ideas for writing, perhaps as a result of the temporary novelty of self-monitoring this process. Second, the contingency management group showed clear increases in the output of creative ideas compared to baseline levels.

The level of listing novel ideas then remained stable -- as did the productivity of writing under the external contingency. Third, noncontingent subjects also showed an increase in the output of creative ideas that paralleled their increases in writing output. Fourth, control subjects demonstrated that the act of self-monitoring creative ideas for writing is not sufficient to induce creative thinking at persistant levels. Nor, for that matter, did creative ideas appear spontaneously in the absence of substantial writing, at least over a period of 10 weeks during the academic year.

DISCUSSION

Contingency management of writing productivity seems to facilitate, not impede, the appearance of creative ideas for writing. That is, subjects who were 'forced' to write by a powerful external contingency not only produced more written copy but also generated more creative ideas for writing than did subjects who wrote spontaneously. Subjects who were encouraged to write more but who were not pressured to do so with contingencies reported moderate levels of creative ideas. And subjects who voluntarily refrained from writing had minimal levels of logged creativity.

Why would contingency management in writing accompany increases in creative ideas? In part, the answer may be that establishing a regular regimen of writing follows fundamental notions of stimulus control -- of high rates of composing and of thinking about writing and conditions for similar responding on a habitual basis (Zoellner, 1969). This beneficial effect of contingency management is also consistent with anecdotal accounts of good writing. The most accomplished writers are evidently unique for the regularity with which they think about writing (Gould, 1980). Conversely, the most unskilled writers spend little time dealing with writing; thus, they evidence a high degree of awkwardness in transferring from talking to composing. Only rarely, according to Perl (Note 1), do problem

writers develop the momentum of writing regularly or of getting beyond writing discrete and unrelated bits of material. A final explanation of the interaction between contingency management and creativity derives from research on observational skills (Boice, 1982b). Writing seems to be an endeavor that, like other skills, must be practiced regularly for good effect (Applebee, 1981; Hull, 1981). It requires, as do other 'arts', perceiving deeply and in great detail (Edwards, 1979). And it results, when it is practiced habitually, in the elaboration of thinking processes such as 'directed remembering', 'noticing', and a 'readiness to perceive the unexpected' -- all aspects of creative thinking (Perkins, 1981).

Despite their clarity, the results of this study will no doubt be seen as problematic. One problem concerns the apparent neglect of the 'process' of writing while overemphasizing 'productivity'. It is true that writing therapists should learn techniques for teaching unskilled writers to generate, organize, and convey their ideas (Hayes & Flower, 1980). But most patients who seek treatment for problems like writing blocks are already skilled writers who may not need help on process matters. What they need, instead, is an appreciation of principles that more productive authors have already learned: that writing is best done on a regular schedule, regardless of mood, and that creative inspiration is more likely to follow, than precede, productivity in writing.

The second problem in accepting these results may be more implicit and connected with the ways in which we have learned to write (Boice, 1982c). Frustrated, perhaps, by the expectation that we should be able to produce clever material with spontaneity and without practice or revision, we may be tempted to avoid the study and treatment of writing. And we may, consequently, help perpetuate notions of writing as a behavior that, along with creativity, seems best accounted for as a capricious faculty which can neither be understood nor facilitated (Skinner, 1969). The suggestion here, no matter how discomfiting it

may be, is that creativity is much more the result of hard work than of genuis. Creative people, despite their claims for sudden and brilliant insight, evidently rely on regular habits, many of which may be forced on them by schedules and other external contingencies (Perkins, 1981; Skinner, 1972).

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Table 1

Writing Output: Mean Number of Written Pages Per Scheduled/Potential Writing Day

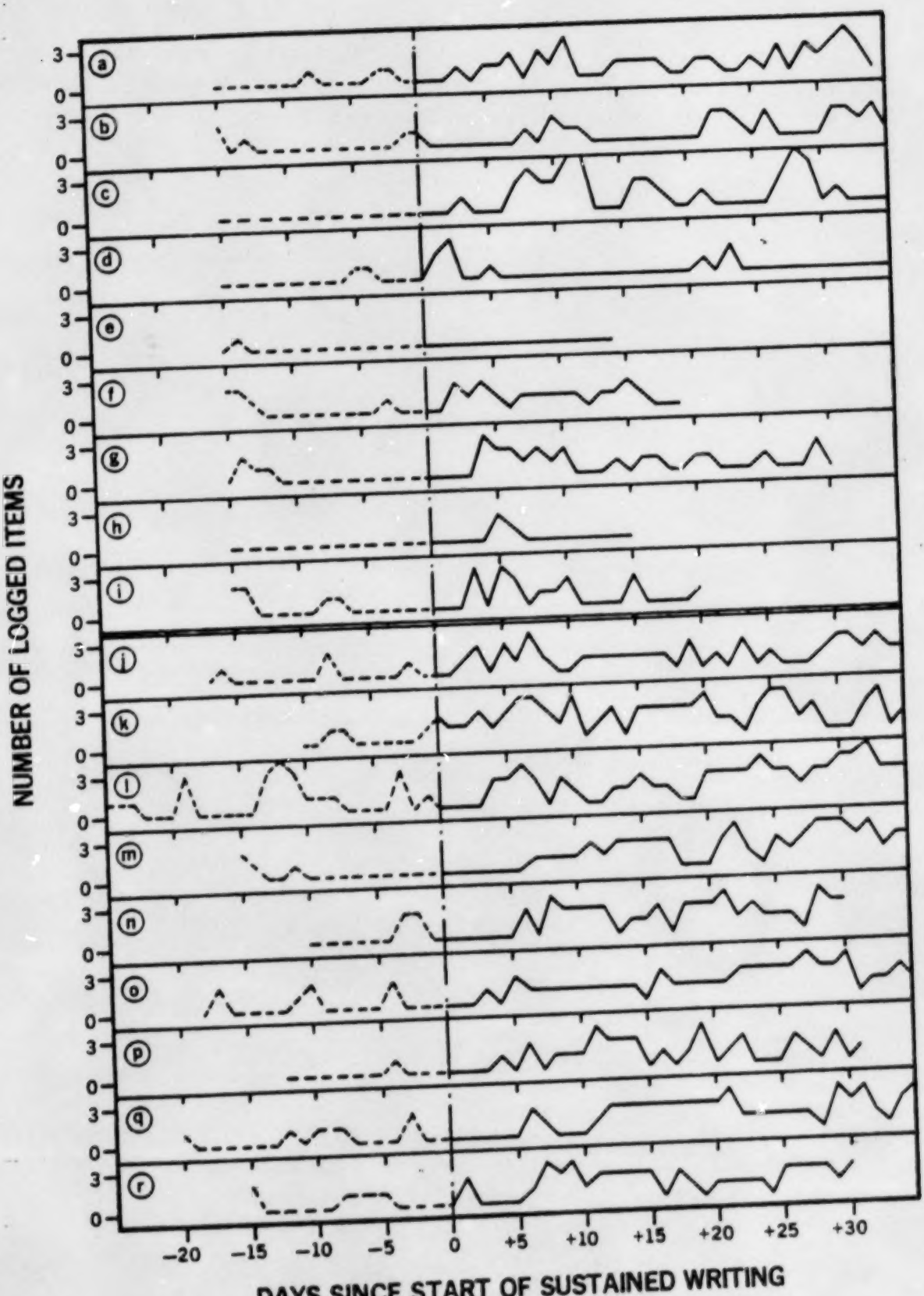
Group (writing condition)	Baseline phase	Post-baseline phase
Contingency management (forced)	0.4	3.2
Noncontingent (spontaneous)	0.3	0.9
Control (abstain)	0.1	0.2

FIGURE CAPTIONS

Figure 1. Individual graphs of the self-reported productivity of novel and useful ideas for writing in nine subjects (a-i) who planned regular writing but did not employ external contingencies, and in nine subjects (j-r) who did employ external contingencies. Zero day designates the point at which the first group (a-i) expected to begin regular writing and at which the second group (j-r) instituted the external contingency for writing.

Figure 2. Group means of logged creative ideas, before and after the onset of regular writing for contingency management and noncontingent subjects. Control subjects had volunteered to defer all but absolutely essential writing until the end of the project.

Fig. 1


NUMBER OF LOGGED ITEMS
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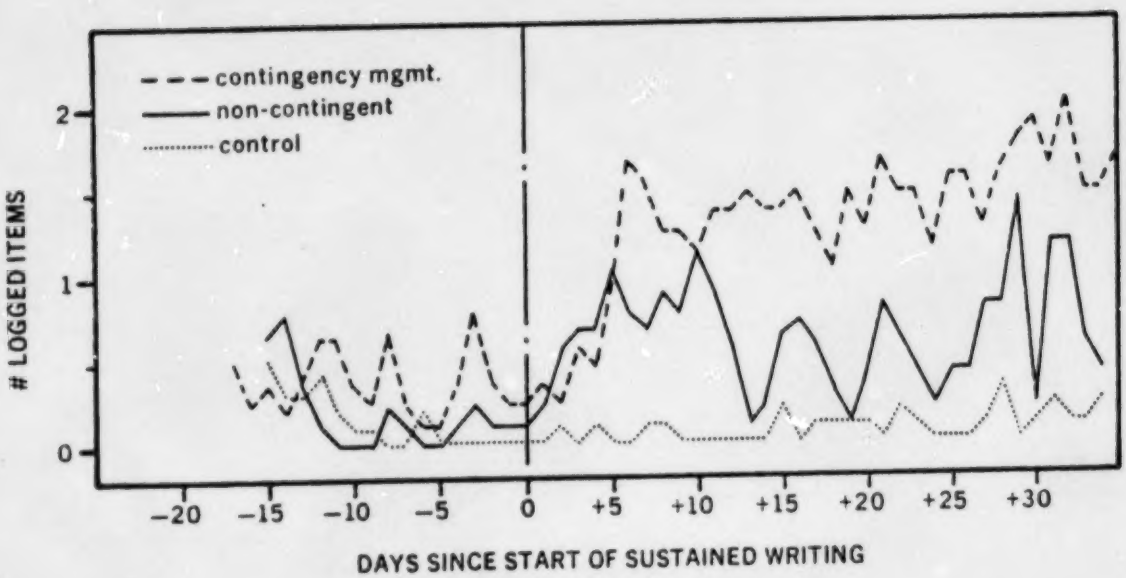
DAYS SINCE START OF SUSTAINED WRITING

Fig. 2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DAYS SINCE START OF SUSTAINED WRITING